

INSECT SODIUM CHANNELS FROM INSECTICIDE-SUSCEPTIBLE  
AND INSECTICIDE-RESISTANT HOUSE FLIES

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ABSTRACT OF THE DISCLOSURE

10 The present invention is directed to isolated  
nucleic acid molecules encoding a voltage-sensitive sodium  
channel (VSSC) of *Musca domestica*, the VSSC being capable  
of conferring insecticide susceptibility or insecticide  
resistance to *Musca domestica*, as well as to the isolated  
voltage-sensitive sodium channels of *Musca domestica*  
encoded thereby. Nucleic acid molecules encoding  
insecticide susceptible VSSCs and nucleic acid molecules  
15 encoding insecticide resistant VSSCs are provided.  
Methods for increasing or decreasing the expression of  
functional voltage-sensitive sodium channels in host cells  
are also provided, as well as methods using the sodium  
channels. Also provided is a method for isolating other  
20 voltage-sensitive sodium channels.

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